

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Applicant:

David B. Crenshaw

Filed:

Serial No.

For: REMOTE CONTROL TEST  
APPARATUS

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Art Unit:

Examiner:

Attorney Docket No.: D01248USUS

PRELIMINARY AMENDMENT

Commissioner of Patents  
and Trademarks  
Washington, D.C. 20231

Dear Sir:

Applicant files the present Preliminary Amendment with the filing of the accompanying application which is a division of U.S. Application Ser. No. 09/428,898, filed October 28, 1999. The amendments made herein amend the claims of the present application by cancelling claims elected in the previous application and adding additional claims to more particularly claim the invention of the non-elected claims of the previous application.

In the Claims

Please cancel claims 1 through 14.

Please amend claim 15 as follows:

- 1 15.(amended) An infrared wavelength remote control signaling system for activation of
- 2 microcontroller circuit means comprising:
- 3 a) an infrared detector for providing an electrical signal output in response to an infrared
- 4 remote controller command signal;

1           b)     a detector housing including a substantially cylindrical shell having a central bore  
2 therethrough including a detector mounting section disposed within said central bore at one end of  
3 said shell;

4           c)     said cylindrical shell having a cable receiving section disposed within said central  
5 bore at the other end of said shell;

6           d)     said detector being fixedly mounted in the central bore of said detector mounting  
7 section, disposed in recessed relation to the open end of said central bore in said shell;

8           e)     a cable for conveying the electrical signal output of said detector to the [said]  
9 microcontroller circuit means, said cable being [closely] received within the central bore of the cable  
10 receiving section of said detector housing, said cable being electrically connected at one end thereof  
11 to the electrical output of said detector and electrically connected at the other end thereof to the  
12 [said] microcontroller circuit means.

Please add the following claims:

20.     The remote test system according to claim 15 wherein the detection section of said detector housing is disposed at one end of said housing and has a diameter greater than the diameter of the cable section of said housing.

21.     The remote test system according to claim 20 wherein the central bore of said detector mounting section is lined with an electrically conductive shielding and said shielding is electrically connected to a ground potential terminal in the microcontroller circuit means.

22.     The remote test system according to claim 21 wherein said detector is adapted with a conductive case and the case is electrically connected to the shielding in said detector mounting section.

1 23. The remote test system according to claim 22 wherein said cable connecting said detector to  
2 the microcontroller circuit has a ground conductor and said ground conductor is electrically  
3 connected to said detector housing and the shielding in said detector mounting section.

1 24. The remote test system according to claim 23 wherein said cable in said cable receiving  
2 section is secured into a fixed relationship with said detector housing.

1 25. The remote test system according to claim 24 wherein said cable is secured by a potting  
2 compound.

1 26. The remote test system according to claim 15 wherein said cable has connected thereto a  
connector for detachable connection the remote test system.

27. The remote test system according to claim 26 wherein said connector has a cable receiving  
section having a diameter comparable to the diameter of the cable so as to receive said cable in a  
tight fit.

28. The remote test system according to claim 27 wherein said connection of said cable to said  
connector is reinforced with a elastomeric stress relieving sleeve disposed over said cable and cable  
receiving sleeve.

1 29. The remote test system according to claim 27 wherein the detector mounting section of said  
2 detector housing is disposed at one end of said housing and has a diameter greater than the diameter  
3 of the cable section of said housing.

1 30. The remote test system according to claim 29 wherein the central bore of said detector  
2 mounting section is lined with an electrically conductive shielding and said shielding is electrically  
3 connected to a ground potential terminal in the microcontroller circuit means.

4

31. The remote test system according to claim 30 wherein said detector is adapted with a conductive case and the case is electrically connected to the shielding in said detector mounting section.

32. The remote test system according to claim 31 wherein said cable connecting said detector to the microcontroller circuit has a ground conductor and said ground conductor is electrically connected to said conductive case and the shielding in said detector mounting section.

33. The remote test system according to claim 32 wherein said cable in said cable receiving section is secured into a fixed relationship with said detector housing.

34. The remote test system according to claim 33 wherein said cable is secured by a potting compound.

35. The remote test system according to claim 34 wherein said cable is electrically shielded and said shielding is electrically connected to said detector housing and said shielding in said detector mounting section.

36. A detector for an infrared wavelength remote control signaling system comprising:

- a) an infrared wavelength detector having a receiving eye for providing an electrical signal output in response to a received infrared command signal;
- b) a detector housing including a substantially cylindrical shell having a central bore therethrough terminating at a first end and a second end including a detector mounting section disposed within said central bore generally disposed at the first end of said shell;
- c) said cylindrical shell having a cable receiving section disposed within said central bore generally at the second end of said shell;
- d) said detector being fixedly mounted in the central bore of said detector mounting section, disposed in recessed relation to the open end of said central bore in said shell whereby a conical receiving angle  $\alpha$  is defined;

12 e) a cable for conveying the electrical signal output of said detector to electrical circuit  
13 means for processing the received signal, said cable being received within the central bore of the  
14 cable receiving section of said detector housing, said cable being electrically connected at one end  
15 thereof to the electrical output of said detector and electrically connected at the other end thereof to  
16 the electrical circuit means.

1 37. The detector according to claim 36 wherein said cable has connected thereto a connector for  
2 detachable connection the remote control signaling system.

1 38. The detector according to claim 37 wherein said connector has a cable receiving section  
2 having a diameter comparable to the diameter of the cable so as to receive said cable in a tight fit.

39. The detector according to claim 38 wherein said connection of said cable to said connector  
is reinforced with an elastomeric stress relieving sleeve disposed over said cable and cable receiving  
sleeve.

40. The detector according to claim 39 wherein the detector mounting section of said detector  
housing is disposed at one end of said housing and has a diameter greater than the diameter of the  
cable section of said housing.

1 41. The detector according to claim 40 wherein the central bore of said detector mounting section  
2 is lined with an electrically conductive shielding and said shielding is electrically connected to a  
3 ground potential terminal in the remote control signaling system.

1 42. The detector according to claim 41 wherein said detector is adapted with a conductive case  
2 and the case is electrically connected to the shielding in said detector mounting section.

1 43. The detector according to claim 42 wherein said cable connecting said detector to the remote  
2 control signaling system has a ground conductor and said ground conductor is electrically connected  
3 to said conductive case and the shielding in said detector mounting section.

1 44. The detector according to claim 43 wherein said cable in said cable receiving section is  
2 secured in a fixed relationship with said detector housing.

1 45. The detector according to claim 44 wherein said cable is secured by a potting compound.

1 46. The detector according to claim 45 wherein said cable is electrically shielded and said  
2 shielding is electrically connected to said conductive case and said shielding in said detector  
mounting section.

47. The detector according to claim 36 wherein said cable is a shielded cable and said shielding  
is electrically connected to a ground potential terminal in said remote control signaling system.

48. The detector according to claim 47 wherein said central bore of said detector mounting  
section is lined with an electrically conductive shielding and said shielding is electrically connected  
to a ground potential terminal in said remote control signaling system.

1 49. The detector according to claim 48 wherein said shielding of said detector mounting section  
2 is electrically connected to the shielding of said cable and to the ground potential terminal of said  
3 remote control signaling system.

1 50. The detector according to claim 49 wherein said infrared detector is adapted with a  
2 conductive case and said case is electrically connected to said shielding of said housing and said  
3 cable shielding.

Applicant encloses herewith a clean copy of the amended Claim 15, above.

If the Examiner feels that a telephone conference with Applicant's attorney would advance the prosecution of the application, he is invited to call the undersigned at 901-683-8757.

Respectfully submitted,



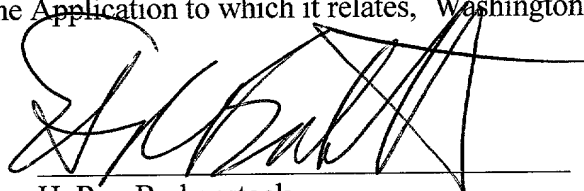
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Date: October 15, 2001

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CERTIFICATE UNDER 37 CFR 1.8(a)

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Assistant Commissioner for Patents, BOX PATENT APPLICATION together with the Application to which it relates, Washington, D.C. 20231, on October 15, 2001.



H. Roy Berkenstock  
Registration No. 24,719

Date: October 15, 2001

0997450-10450

1 15. An infrared wavelength remote control signaling system for activation of microcontroller  
2 circuit means comprising:

3 a) an infrared detector for providing an electrical signal output in response to an  
4 infrared remote controller command signal;

5 b) a detector housing including a substantially cylindrical shell having a central bore  
6 therethrough including a detector mounting section disposed within said central bore at one end  
7 of said shell;

8 c) said cylindrical shell having a cable receiving section disposed within said central  
9 bore at the other end of said shell;

10 d) said detector being fixedly mounted in the central bore of said detector mounting  
11 section, disposed in recessed relation to the open end of said central bore in said shell;

12 e) a cable for conveying the electrical signal output of said detector to the  
13 microcontroller circuit means, said cable being received within the central bore of the cable  
14 receiving section of said detector housing, said cable being electrically connected at one end  
15 thereof to the electrical output of said detector and electrically connected at the other end thereof  
16 to the microcontroller circuit means.